UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

OCT 2 3 2013

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
Article Numbers: 7005 3110 0000 5967 6776 - 7005 3110 0000 5967 6783

Gedalye Szegedin, Administrator Village of Kiryas Joel P.O. Box 566 Monroe, New York 10949	Peter S. Hammond, Deputy Commissioner, Orange County Department of Public Works, Division of Environmental Facilities & Services 2455-2459 Route 17M P.O. Box 637 Goshen, New York 10924-0637

Re: Sanitary Sewer System Compliance Evaluation Inspection Village of Kiryas Joel
Village of Kiryas Joel WWTP SPDES Permit No. NY0250520
OCSD No. 1 Harriman Plant SPDES Permit No. NY0027901

Dear Messrs. Szegedin and Hammond:

As part of a joint effort between the United States Environmental Protection Agency ("EPA") and the New York State Department of Environmental Conservation ("NYSDEC") to ensure that the discharge of sanitary sewage is minimized, we conducted a Sanitary Sewer System ("SSS") Compliance Evaluation Inspection ("CEI") of your facility on April 4, 2013.

The principal purpose of the SSS CEI was to assess your system's adequacy in minimizing Sanitary Sewer Overflows (SSOs). As described in the attached SSS CEI report there were Areas of Concern identified as a result of this SSS CEI (Specifically, see report Section II Summary/Areas of Concern).

Within thirty (30) days of receipt of this letter, Orange County and the Village of Kiryas Joel, either jointly or separately, please respond to the EPA in writing with the information requested and the actions that have been taken or will be taken (along with a schedule) to address the Areas of Concern identified in the attached report. Also, please send copies of your response to the New York State Department of Environmental Conservation (Joseph DiMura, P.E., Director, Bureau of Water Compliance, NYSDEC, 625 Broadway, Albany, NY 12233). If you have any questions concerning our inspection, please feel free to contact me at (212) 637-3950 or Mr. Murray Lantner, P.E. at (212) 637-3976 or email Mr. Lantner at lantner.murray@epa.gov.

Additionally, further guidance and information concerning the control of SSOs may be found by accessing the following EPA web site: http://cfpub.epa.gov/npdes/home.cfm?program_id=4.

Sincerely yours,

Larry Gaugler

Larry Gaugler, P.E.
NPDES Team Leader
Water Compliance Branch

cc: Joe Dimura, NYSDEC w/enclosure
Steven E. Adams, P.E., Laberge Group
Adadayo Adewole NYSDEC Region 3, via email
Manju Cherian, NYSDEC Region 3, via email
Michael P. Tremper, CAMO Pollution Control, Inc.

EPA

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Form Approved.
OMB No. 2040-0057

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N 2 5	3 NY0250520 11	12 130413 17	18 &	19 R	20 1

Remarks: 2

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
6 1 69	70	71	72	73 74 7 80

Section B: Facility Data

Name and Location of Facility Inspected *(for industrial users discharging to POTW, also include POTW name and NPDES permit number*

Village of Kiryas Joel WWTP, Bakertown Road, Kiryas Joel, NY

Entry Time/Date	Permit Effective Date
4/3/13 10:00 AM	
Exit Time/Date	**Permit Expiration Date**
4/3/13 4:30 PM	

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)

Anthony Griffin, P.E. Orange County DPW, (845) 291-2460, email: AGriffin@orangecountygov.com; Steven Adams, P.E. Project Manager, Laberge Group, Contractor for the Village of Kiryas Joel, sadams@labergegroup.com (518) 458-7112

Name, Address of Responsible Official/Title/Phone and Fax Number(s)

Gedalye Szegedin, Administrator
Village of Kiryas Joel
P.O. Box 566, Monroe, NY 10949

Contacted: Yes [ ] No [x]

Other Facility Data

Peter S. Hammond, Deputy Commissioner, Orange County Department of Public Works, Division of Environmental Facilities & Services
2455-2459 Route 17M
P.O. Box 637
Goshen, NY 10924-0637
OCSD No. 1 Harriman Plant SPDES Permit No. NY0027901

Section C: Areas Evaluated During Inspection *(Check only those areas evaluated)*

[ ]	Permit	[ ]	Flow Measurement	[x]	Operations & Maintenance	[x]	CSO/SSO (Sewer Overflow)
[x]	Records/Reports	[ ]	Self-Monitoring Program	[ ]	Sludge Handling/Disposal	[ ]	Pollution Prevention
[ ]	Facility Site Review	[ ]	Compliance Schedules	[ ]	Pretreatment	[ ]	Multimedia
[ ]	Effluent/Receiving Water	[ ]	Laboratory	[ ]	Storm Water	[ ]	Other:

Section D: Summary of Findings/Comments *(Attach additional sheets of narrative and checklists as necessary)*

See attached compliance evaluation inspection report for inspection findings.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
Murray Lantner, P.E. Env. Eng.	EPA/DECA-WCB/(212) 637-3976 FAX: (212) 637- 3953	10/24/13
Signature of Management Q/A Reviewer	**Agency/Office/Phone and Fax Numbers**	**Date**
Larry Gaugler, P.E., NPDES Team Leader	EPA/DECA-WCB/(212) 637-3950 FAX: (212) 637- 3953	10/24/13

INSTRUCTIONS

Section A: National Data System Coding *(i.e., PCS)*

Column 1: Transaction Code: Use N, C, or D for New, Change, or Delete. All inspections will be *new* unless there is an error in the data entered.

Columns 3-11: NPDES Permit No. Enter the facility's NPDES permit number - third character in permit number indicates permit type for U=unpermitted, G=general permit, etc.. *(Use the Remarks columns to record the State permit number, if necessary.)*

Columns 12-17: Inspection Date. Insert the date entry was made into the facility. Use the year/month/day format (e.g., 04/10/01 = October 01, 2004).

Column 18: Inspection Type*. Use one of the codes listed below to describe the type of inspection:

A Performance Audit
B Compliance Biomonitoring
C Compliance Evaluation (non-sampling)
D Diagnostic
F Pretreatment (Follow-up)
G Pretreatment (Audit)
I Industrial User (IU) Inspection
J Complaints
M Multimedia
N Spill
O Compliance Evaluation (Oversight)
P Pretreatment Compliance Inspection
R Reconnaissance
S Compliance Sampling

U IU Inspection with Pretreatment Audit
X Toxics Inspection
Z Sludge - Biosolids
Combined Sewer Overflow-Sampling
$ Combined Sewer Overflow-Non-Sampling
+ Sanitary Sewer Overflow-Sampling
& Sanitary Sewer Overflow-Non-Sampling
\ CAFO-Sampling
= CAFO-Non-Sampling
2 IU Sampling Inspection
3 IU Non-Sampling Inspection
4 IU Toxics Inspection
5 IU Sampling Inspection with Pretreatment
6 IU Non-Sampling Inspection with Pretreatment
7 IU Toxics with Pretreatment

! Pretreatment Compliance (Oversight)
@ Follow-up (enforcement)
{ Storm Water-Construction-Sampling
} Storm Water-Construction-Non-Sampling
: Storm Water-Non-Construction-Sampling
~ Storm Water-Non-Construction-Non-Sampling
< Storm Water-MS4-Sampling
- Storm Water-MS4-Non-Sampling
> Storm Water-MS4-Audit

Column 19: Inspector Code. Use one of the codes listed below to describe the *lead agency* in the inspection.

A — State (Contractor)
B ---- EPA (Contractor)
E — Corps of Engineers
J — Joint EPA/State Inspectors—EPA Lead
L ---- Local Health Department (State)
N — NEIC Inspectors
O— Other Inspectors, Federal/EPA (Specify in Remarks columns)
P— Other Inspectors, State (Specify in Remarks columns)
R — EPA Regional Inspector
S — State Inspector
T — Joint State/EPA Inspectors—State lead

Column 20: Facility Type. Use one of the codes below to describe the facility.

1 — Municipal. Publicly Owned Treatment Works (POTWs) with 1987 Standard Industrial Code (SIC) 4952.
2 — Industrial. Other than municipal, agricultural, and Federal facilities.
3 — Agricultural. Facilities classified with 1987 SIC 0111 to 0971.
4 — Federal. Facilities identified as Federal by the EPA Regional Office.
5 — Oil & Gas. Facilities classified with 1987 SIC 1311 to 1389.

Columns 21-66: Remarks. These columns are reserved for remarks at the discretion of the Region.

Columns 67-69: Inspection Work Days. Estimate the total work effort (to the nearest 0.1 work day), up to 99.9 days, that were used to complete the inspection and submit a QA reviewed report of findings. This estimate includes the accumulative effort of all participating inspectors; any effort for laboratory analyses, testing, and remote sensing; and the billed payroll time for travel and pre and post inspection preparation. This estimate does not require detailed documentation.

Column 70: Facility Evaluation Rating. Use information gathered during the inspection (regardless of inspection type) to evaluate the quality of the facility self-monitoring program. Grade the program using a scale of 1 to 5 with a score of 5 being used for very reliable self-monitoring programs, 3 being satisfactory, and 1 being used for very unreliable programs.

Column 71: Biomonitoring Information. Enter D for static testing. Enter F for flow through testing. Enter N for no biomonitoring.

Column 72: Quality Assurance Data Inspection. Enter Q if the inspection was conducted as followup on quality assurance sample results. Enter N otherwise.

Columns 73-80: These columns are reserved for regionally defined information.

Section B: Facility Data

This section is self-explanatory except for "Other Facility Data," which may include new information not in the permit or PCS (e.g., new outfalls, names of receiving waters, new ownership, other updates to the record, SIC/NAICS Codes, Latitude/Longitude).

Section C: Areas Evaluated During Inspection

Check only those areas evaluated by marking the appropriate box. Use Section D and additional sheets as necessary. Support the findings, as necessary, in a brief narrative report. Use the headings given on the report form (e.g., Permit, Records/Reports) when discussing the areas evaluated during the inspection.

Section D: Summary of Findings/Comments

Briefly summarize the inspection findings. This summary should abstract the pertinent inspection findings, not replace the narrative report. Reference a list of attachments, such as completed checklists taken from the NPDES Compliance Inspection Manuals and pretreatment guidance documents, including effluent data when sampling has been done. Use extra sheets as necessary.

*Footnote: In addition to the inspection types listed above under column 18, a state may continue to use the following wet weather and CAFO inspection types until the state is brought into ICIS-NPDES: K: CAFO, V: SSO, Y: CSO, W: Storm Water 9: MS4. States may also use the new wet weather, CAFO and MS4 inspections types shown in column 18 of this form. The EPA regions are required to use the new wet weather, CAFO, and MS4 inspection types for inspections with an inspection date (DTIN) on or after July 1, 2005.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2, DECA-WCB
20th Floor, 290 Broadway, NY, NY 10007

SANITARY SEWER SYSTEM
COMPLIANCE EVALUATION INSPECTION REPORT

Compliance Evaluation Inspection: Village of Kiryas Joel Wastewater Treatment Plant Separate Sanitary Sewer System
Inspection Date: April 4, 2013 **Inspection Time:** 10:00 AM – 4:30 PM
EPA Inspector: Murray Lantner, P.E. Environmental Engineer, USEPA Region 2, (212) 637-3976, email: Lantner.Murray@epa.gov **NYSDEC Inspectors:** Adedayo Adewole, P.E. NYSDEC Reg. 3 Division of Water, 100 Hillside Ave. Suite 1W, White Plains, N.Y. 10603-2860 Tel: (914)428-2505 Ext. 365, Fax: (914)428-0323 email: ajadewol@gw.dec.state.ny.us Manju Cherian, P.E., Env. Eng. 2, NYSDEC Reg. 3 Division of Water, 100 Hillside Ave. Suite 1W, White Plains, N.Y. 10603-2860 Tel: (914)428-2505 Ext. 357, mxcheria@gw.dec.state.ny.us
On-Site Representatives: Anthony Griffin, P.E. Principal Sanitary Engineer, Orange County DPW, Div. of Env. Facilities and Services (845) 291-2460, email: AGriffin@orangecountygov.com Brian R. Ladlee, Building Construction Supervisor, Orange County DPW, Div. of Env. Facilities and Services (845) 291-2033 Steven Adams, P.E. Project Manager, Laberge Group, Contractor for the Village of Kiryas Joel, sadams@labergegroup.com (518) 458-7112
Site Information: Village of Kiryas Joel WWTP, Bakertown Road, Kiryas Joel, NY **Village of Kiryas Joel, P.O. Box 566 Monroe, NY 10949** **SPDES Permit No. NY0250520**

I. Background and Findings

Collection System:

1. The purpose of this sanitary sewer system ("SSS") Compliance Evaluation Inspection ("CEI") was to assess the adequacy of the system's minimization of Sanitary Sewer Overflow ("SSO") discharges.

2. The Village of Kiryas Joel ("KJ" or "Village") has a 100% separate sanitary collection system and wastewater treatment plant ("WWTP") covered under SPDES Permit No.

NY0250520. The treatment plant is permitted to discharge a 30 day average of 0.97 MGD . The KJ WWTP is owned by the Village of Kiryas Joel, but is operated by an Orange County contractor, CAMO. The sanitary collection system is operated and/or owned by Orange County not by the Village. There is one sanitary pump station in the Village's collection system that is owned by the Village. There is a pump station from the Kiryas Joel Poultry Plant that pumps directly into the Village's WWTP. The Village's sanitary pump station has also has an overflow weir on the west side of the pump station and an overflow riser pipe on the east side of the pump station to transmit sanitary flow that is not pumped to the Village's WWTP to the Orange County Sewer District (OCSD) No. 1 (Harriman Plant SPDES Permit No. NY0027901).

3. The population of Village of Kiryas Joel is approximately 22,000 and the Village is approximately 1.1 square miles.

4. According to Anthony Griffin of Orange County Department of Public Works (DPW) Division of Environmental Facilties, OCSD No. 1 (Harriman Plant) consists of 85 miles of separate sanitary sewers of which the Village of Kiryas Joel constitutes about 20% of these 85 miles.

5. According to OCSD representatives the SSS consists of Poly Vinyl Chloride (PVC) pipe, Asbestos Cement Pipe (ACP), and acrylonitrile butadiene styrene (ABS) Truss Pipe.

6. According to OC Personnel, there is a small contribution to the Village's sanitary sewer system from the Town of Monroe, but all of these sanitary sewers are also owned/operated by OCSD.

7. The Village's sanitary wastewater, with the exception of process wastewater and sanitary wastewater flows from the Kiryas Joel Poultry Plant, all flows to the Village's sanitary pump station where it is either pumped to the Village's WWTP or overflows a weir or riser and flows into the OCSD No. 1 Harriman WWTP collection system.

8. The entire KJ collection system is said to be mapped and there are about 600 manholes.

Pump Stations / Lift Stations:

9. The Village of Kiryas Joel owns 1 sanitary lift station with 2 Variable Frequency Drive pumps. One pump can pump up to 700 gpm (1 MGD). With 2 pumps running can pump 834 gpm (1.2 MGD). There is a gas motor that can run Pump No. 2 that is automatically activated when there is a power failure.

10. Kiryas Joel Poultry owns a pump station for pumping its process wastewater to its pretreatment facility and then pumping its wastewater to the Village of Kiryas Joel WWTP. KJ Poultry also owns a separate pump station for transmitting its sanitary wastewater directly to the Village's WWTP. NYSDEC representatives noted that KJ Poultry, nor the Village of Kiryas Joel, requested or received approval from NYSDEC to connect the KJ Poultry process wastewater to the Village of Kiryas Joel WWTP.

11. During the inspection, the Village was in the process of installing a mechanical screen at its Sanitary Pump Station which was to be completed on or about September 2013. Based on a September 17, 2013 letter to the NYSDEC, Laberge Group, the Village's engineering consultant indicated that the pump station screening upgrade would be completed in November 2013. The Village and/or the plant and pump station operators (CAMO) said that the Village has a higher than normal amount of screenings and rags. In addition the Village said that a new manually cleaned screen would be installed at the WWTP headworks in 2013/2014. Laberge's October 18, 2013 letter to NYSDEC indicated that WWTP screening improvements would be completed by October 2014.

12. Flow rate to the KJ WWTP from the Sanitary Pump Station are not monitored. The total influent KJ WWTP flows and the influent flow from the KJ Poultry process wastewater pump station are monitored so the sanitary pump station flows can be derived. Facility representatives explained that approximately 0.4 MGD of KJ Sanitary Wastewater is pumped from the sanitary pump station to the KJ WWTP and approximately 1.4MGD of sanitary wastewater overflows the weir at the pump station and flows to the OCSD No. 1 Harriman WWTP. Photographs 1202 and 1203 (Attachment 1) show the diversion chamber on the west side of the sanitary pump station. Photos 1204 and 1205 show the overflow point into a riser pipe in the manhole on the east side of the pump station.

13. Based on conversations with the KJ WWTP operators, process wastewater flows from the KJ Poultry Plant enter the KJ WWTP at a flow rate of 400 gpm when transmitting flow from approximately 8:30 AM to late evening (9PM to Midnight) with a 2 hour shutdown in the middle of the day. When the KJ Poultry effluent pumps are on, the sanitary pump station can only pump up to 368 gpm because flows over 768 gpm will overflow the Rotating Biological Contactors (RBCs) at the KJ WWTP. It was planned that on or about April 9, 2013 that a radio controlled system would be installed so that the KJ WWTP operators, when on-duty, could adjust the KJ sanitary pump station flows, remotely from the WWTP without going to the sanitary pump station. However, controls that would automatically adjust the sanitary pump station flows based upon the KJ Poultry plant flow to the KJ WWTP were not being installed.

14. The KJ WWTP does not have an operating plan related to balance flows and manage how the Sanitary Pump Station and WWTP operate in conjunction with the Poultry Plant discharges. Personnel indicated that there was an agreement in place that would limit KJ Poultry Plant flows to the Village of KJ WWTP to 300 gpm.

Flow Metering and Billing:

15. Village of KJ WWTP plant influent is measured at the wastewater treatment plant. WWTP and Sewer fees are not based upon wastewater flow volumes from homeowners because they are billed at a flat rate. Users of the Village of KJ WWTP (After June 15, 2000) are billed at a Type B billing $530 per year. All other WWTP users in the county and KJ users before June 15, 2000 are on a Type A $388.82 (See Attachment 2). Sewer Tax for Orange County is based on property taxes Type I or II based on proximity to sewer mains. The descriptions used for the Type I and Type II sewer taxes, as shown in the Details for Taxes

Levied 2013 are "Co 1 bond stp&intc" and "Co 1 bond laterals", respectively (See Attachment 2) . The single family home tax rate is approximately $150 to $395. A single condo is approximately $100 per year.

SSO Discharges / Spills:

16. Sewer complaints from within Kiryas Joel to Orange County were submitted to EPA following the inspection by Mr. Griffin for the period 2008 to approximately April 2013. Review of the complaints by EPA did indicate some repetitive problems within the portion of the sanitary sewer collection system within Kiryas Joel, such as those on Satmar Drive and also Quickway Drive/Road.

Table 1: Kiryas Joel Sewer Complaints to Orange County 2011 to (Approx March 2013)

Date of Complaint	Problem Location	Complainant Reported	Orange County Response	Mainline Obstruction*
4/4/2013	18 Getzil Berger Drive, UTA Boys School	toilets flushing slowly/backing up	Mainline is unobstructed, internal problem	No
1/28/2013	43 Satmar Drive	Sewer backup on 1/28/13 - called in on 2/8/13	See Satmar Driver entries from 1/28 and 1/26/13	Y
1/28/2013	43 Satmar Drive	Sewer backuup in basement starting from 1/26/13	Mainline blockage caused by foreign material large rag buildup 41 to 43 Satmar Drive. Caused basement backup.	Y
1/26/2013	41 Satmar Driver	Mainline blockage and manhole overflow	Mainline blockage caused by foreign material large rag buildup 41 to 43 Satmar Drive. Caused basement backup.	Y
6/1/2012	Quickway Road	Manhole in street overflowing - Manhole and Street Flooded.	Flushed mainline in street, released blockage. Backup on Quickway Dr. between MH NW13 AND MH NW 391. Backup caused MH NW 391 to overflow (weeping) for 40 minutes until blockage was cleared. Overflow was said to remain on roadway. Was caused by foreign material, rags. OC cleared blockage and vacuumed.	Y

Date of Complaint	Problem Location	Complainant Reported	Orange County Response	Mainline Obstruction*
4/29/2012	Easment between Yoel Klein Ct. and KJPS easement.	Overflow from lateral cleanout extension that are not capped.	MH NE SMH#3 to MH NE SMH#B.E.3 (dog house) had a minor blockage. Stone, gravel, grit, rags) due to debris dropped down lateral cleanouts that had recently been raised for construction by Mr. Wiezburger. MH was vacuumed and sewer was flushed which increased flow to normal and stopped the overflow.	Y
2/4/2012	11 Satmar Drive	Manhole overflowing into Yard; Also MH NE510 also overflowing.	Line between manhole NE 501 and 510 blocked with roots, grease, rags. Blockage cleared with flusher truck.	Y
1/15/2012	5 Quickway Dr.	Manhole in street overflowing	Mainline blockage caused by foreign materials entering the system, rocks, gravel, bricks between MH NW10 to NW13. The line was vacuumed.	Y
12/8/2011	Nickelsburg Rd	Water coming out of manhole	OC reported that mainline was clear but suspected a water line break and notified the water department. Manhole and Street flooded.	N
11/16/2011	13 Eahal Court	Backup in basement boiler room has occurred 3 or 4 times in last 6 months. Said that plumber cleaned lines and removed baby wipes but plumber thought also mainline problem	County flushed Mainline and did not see blockage. County explained to customer about the impact of flushing baby wipes. Orange County Parcel Reivew 12/12/11 also required that the illegal basement floor drain be eliminated. Orange county returned 12/6/11 and did additional investigations and found that the mainline is more than 1/2 full during high usage periods and that there are 3 pipes connected to the one lateral which makes it difficult for the flow to enter the mainline. OC recommended additional lateral connections. Complainant reported a manhole overflow a few weeks prior.	?

Date of Complaint	Problem Location	Complainant Reported	Orange County Response	Mainline Obstruction*
7/4/2011	13 Israel Zupnick Drive	Mainline manhole in yard has blockage, toilets not flushing, manhole flooded, manhole overflow	Cleared mainline blockage of rag. Cleaned area, verified building sewer working	Y
5/4/2011	6 Lubin Way and Quickway Drive	Manhole in road overflowing 6 days ago	OC investigated and found sewer running normally.	?
5/3/2011	1 Apta Way (Quickway Corner Apta Way and Rimenev)	Strong Odors on 5/2/11 and on 4/30/11	Unfounded, but found dirty pond nearby and cleaned MH NW12 due to rags on a stick.	N
4/13/2011	1 Lemberg court	Manhole overflow	OC identified this as a stormsewer manhole.	N
4/2/2011	Quickway Road near Remnikev	Manhole Overflow MH NW12 overflowing into street	Flushed MH NW12 from downstream side and then observed normal flow and cleaned up area.	Y
3/7/2011	Mountain Road and Redomsk	Manhole Overflow	No sanitary backup, it was a storm drain backup near construction site on Acres Road	N

*Mainline obstruction (sanitary sewer main not a private lateral or storm sewer problem) y= yes, n=no, ? = not clear if a there is or was a sanitary sewer main obstruction.

17. According to Orange County (OC) personnel, there is no list of problem or trouble spots within the Village of Kiryas Joel, but that OC personnel was familiar with problem locations. OC personnel indicated that manhole NW-17 in the past had a history of surcharging, but had been corrected. During the inspection (As shown in Photos 1219 and 1220) debris and rags were seen near the top of the manhole NW-17 indicating that there had been surcharging of the manhole. A surge stick was placed in this "control" manhole so that OC could detect if there had been recent surcharging. However, the surge stick was said to not to be functioning properly. OC personnel indicated that the line from NW-12 to the pump station (based upon drawing B-6 – Attachment 5) had been expanded to a 24" line in approximately 2005 which helped with the surcharging issues at the

upstream NW-17 manhole. OC personnel explained that if the problems at NW-17 continued they would need to up-size the line from NW-12 to NW-32 (Currently it's a 10" line from NW-12 to NW-18 and an 8" line from NW-18 to NW-32).

18. OC has a written procedure for responding to SSOs and spills in the collection system. The written procedure includes instructions for an OC Field Crew and/or Harriman WWTP superintendent/Principal Sanitary Engineer to stop the overflow and prepare a detailed report, notify OC Risk Management for potential reimbursement. See Attachment 3 for the procedures. There is no procedure listed for notifying the NYSDEC if and when the sanitary wastewaters enter the Municipal Separate Storm Sewer System (MS4) and/or Water of the U.S. as required by the Harriman and /or KJ SPDES Permits and/or 6 NYCRR Part 750-2.7 and/or the Sewage Pollution Right to Know Act. Sanitary sewer system spills and overflows that enter the storm sewer system would ultimately discharge to tributaries of the Ramapo River.

19. According to Mr. Griffin and Mr. Ladlee OCSD No. 1 collection systems experience approximately 3 backups per year. Table 1 above is a summary of backups that occurred within KJ based on the reports submitted by OCSD. 2011 which had 2 severe rain events including Hurricane Irene was said to have caused additional backups/SSOs. Based upon information received during the inspection, KJ has approximately 17 miles of sanitary sewer. Three backups per year in KJ due to an obstruction in OC's sanitary sewer main (as occurred in 2012 (See Table 1 above)) translates to 17.6 backups per 100 miles of sanitary sewer per year. This rate of sanitary sewer mainline obstructions is higher than typical benchmarks for other municipalities. (e.g. See 1. Collection Systems: Methods for Evaluating and Improving Performance, Arbour and Kerri, 1998; 2. Municipal Benchmarks – Assessing Local Performance and Establishing Community Standards, Ammons 2012; 3. Protocols for Identifying Sanitary Sewer Overflows American Society of Civil Engineers EPA Cooperative Agreement #CX 826097-01-0, June 2000)

20. OC has a risk management agency that can pay out claims against OC due to basement backups caused by backups in the sanitary main.

Capacity Issues / Collection System Maintenance:

21. OC staff said that OCSD No. 1 has no excessive inflow and infiltration (I&I). They had surveyed the whole system in 1994 have been thru the entire collection system more than once – about 2 or 3 times since then and are utilizing a contractor for manhole and pipe repairs.

22. OC Staff said that the smoke tested all of KJ in 2005 or 2006 corrected all of the problems (e.g. roof leaders, sump pumps, etc.) detected by the smoke testing. Both OC Staff and NYSDEC Personnel identified that flows at the Harriman Plant exceeded permit limitations in 2011. OC personnel said that this was due to large rainfall that year (80" of rain). As shown in the October 17, 2012 letter and February 15, 2012 Notice of Violation from NYSDEC to OC (See Attachment 4) , the OCSD No. 1 Harriman Plant was required to submit a Flow Management Plan and reduce flows to the Harriman Plant.

23. OC personnel said that its Sewer Use Ordinance prohibits stormwater connections. In any new request for sanitary connections, OC Personnel will inspect for illicit roof leader and sump pumps.

24. OC Personnel said that they flush, CCTV lines, repair manholes, raise frames, fix chimneys and they have a jet truck with several different heads. They explained that the Village of KJ sewers were cleaned in 1997-2001. OC Personnel believed that that in mid 2000 that KJ sewers were cleaned when they did the smoke testing. Records of sewer inspection and maintenance in Kiryas Joel were not available. OCSD must submit records or attest to the last 2 times that all of the Village of KJ Sanitary Sewers were comprehensively inspected/cleaned/maintained.

25. OC Personnel estimated that it flushes about 20% of collection lines up to and including 30" sewers. They don't flush the larger sewers. They estimated that the entire system is cleaned approximately every 5 to 7 years.

26. OC does not have a Fats Oil and Grease ("FOG") inspection program but does require an installation of the grease traps as part of parcel reviews that are conducted by OC. Parcel reviews are conducted when a new business connects or when a sewer bill reduction is requested. Parcel reviews also include inspections of sinks and toilets. They are also conducted at larger shopping centers. OC personnel indicated that rags were a large problem within the Village of KJ and a major cause of blockages.

27. CAMO, the contractor that operates the Village of KJ WWTP conducts cleaning of the KJ Sanitary Pump Station periodically.

28. As shown in photographs taken during the inspection (Attachment 1) the East side manhole at the pump station (NE-1 or NE-2) photos 1204 to 1206, Manhole NW-17 photos 1219 and 1220, and Manhole NE-3 photo 1224 are subject to surcharging. The manhole on the eastside of the pump station and manhole NW-17 had rags/debris near the top of the manhole.

Municipal Separate Storm Sewer System (MS4)

29. The KJ MS4 is owned and operated by the Village of KJ and was not reviewed as part of this SSO inspection An MS4 inspection was conducted by EPA/NYSDEC prior to this SSO inspection in March 2013.

II. Summary/Areas of Concern

1. Based on the information provided during this CEI the sanitary sewer system in Kiryas Joel has experienced at least 7 SSOs for the period March 2011 to April 4, 2013. In order to better document the status of such discharges and in order to facilitate a more comprehensive sanitary sewer maintenance program, EPA recommends that the OC address the following areas of concern:

    a. The OCSD Complaint Forms and follow up comments (Additional Comments) not specify if the sanitary sewage spill or overflow reached a waterbody or an inlet into the separate storm sewer system;

b. KJ and/or OCSD must notify NYSDEC if and when the sanitary wastewaters enter the Municipal Separate Storm Sewer System (MS4) and/or Water of the U.S. as required by the Harriman and /or KJ SPDES Permits and/or 6 NYCRR Part 750-2.7 and/or the Sewage Pollution Right to Know Act.

c. The Sewer Backup/Flooded Basement SOP (Att. 3) does not contain a procedure for cleaning up the street or house after the occurrence of an SSO. OC should have a procedure for cleaning up after SSOs and also have handouts to give to residents to educate them on cleanup, safety procedures and risks associated with contacting sewage;

d. As identified above in paragraph 19, Table 1, paragraph 17 and the rest of the section on SSOs and Spills. OC needs to conduct additional inspection and maintenance activities in Kiryas Joel Sanitary Sewer System to prevent and/or minimize SSOs. Please provide EPA with an inspection and maintenance schedule for the KJ sanitary sewer system, especially in areas of the collection system that are more prone to obstructions and surcharging. Orange County/Village of Kiryas Joel must provide details on any preventative maintenance programs that have been or will be instituted in these areas to prevent future sanitary sewer overflows.

e. As identified in paragraph 23 above OCSD must submit records or attest to the last 2 times that all of the Village of KJ Sanitary Sewers were comprehensively inspected/cleaned/maintained.

2. OCSD,the Village of Kiryas Joel and the Kiryas Joel Poultry Plant must work to maximize sanitary wastewater flows to the Village of Kiryas Joel WWTP. OCSD is working to ensure that KJ Poultry's flow rate is less than or equal to 300gpm at all times. Please describe the current status of KJ Poultry restricting its influent flow rate to the KJ WWTP to below 300 gpm. The Village, Orange County and/or its contractor CAMO should consider measures such as automatic controls that can vary the flow at the KJ sanitary pump station based upon incoming flows from the KJ Poultry Plant. As discussed in paragraphs 12 to 14 above, the KJ WWTP needs to develop Standard Operating Procedures (SOPs) for balancing the influent flow from the Sanitary Pump Station and Poultry Plant. OCSD No. 1 (Harriman Plant) Flow Management Plan should also address how sanitary wastewater flows to the KJ WWTP will be maximized so as to reduce flows to the Harriman Plant while ensuring that the KJ WWTP meets its permit limits for flow and other pollutants.

3. As described in paragraph 17 above, the surge stick at Manhole NW-17 must be repaired so that levels of sanitary wastewater in the control manhole can be adequately monitored.

4. Please provide an update of the current status of flow reductions, if any, under the OCSD Flow Management Plan, within the Village of KJ portion of the OCSD No. 1 sanitary sewer system.

ATTACHMENTS

1. Photo Log and Photographs
2. Type A and B Sewer Bill
3. OCSD Sewer Backup and Flooded Basement SOP
4. October 17, 2012 letter and February 15, 2012 Notice of Violation from NYSDEC to OC
5. OCSD No. 1 Sewer Drawing B6 and C6

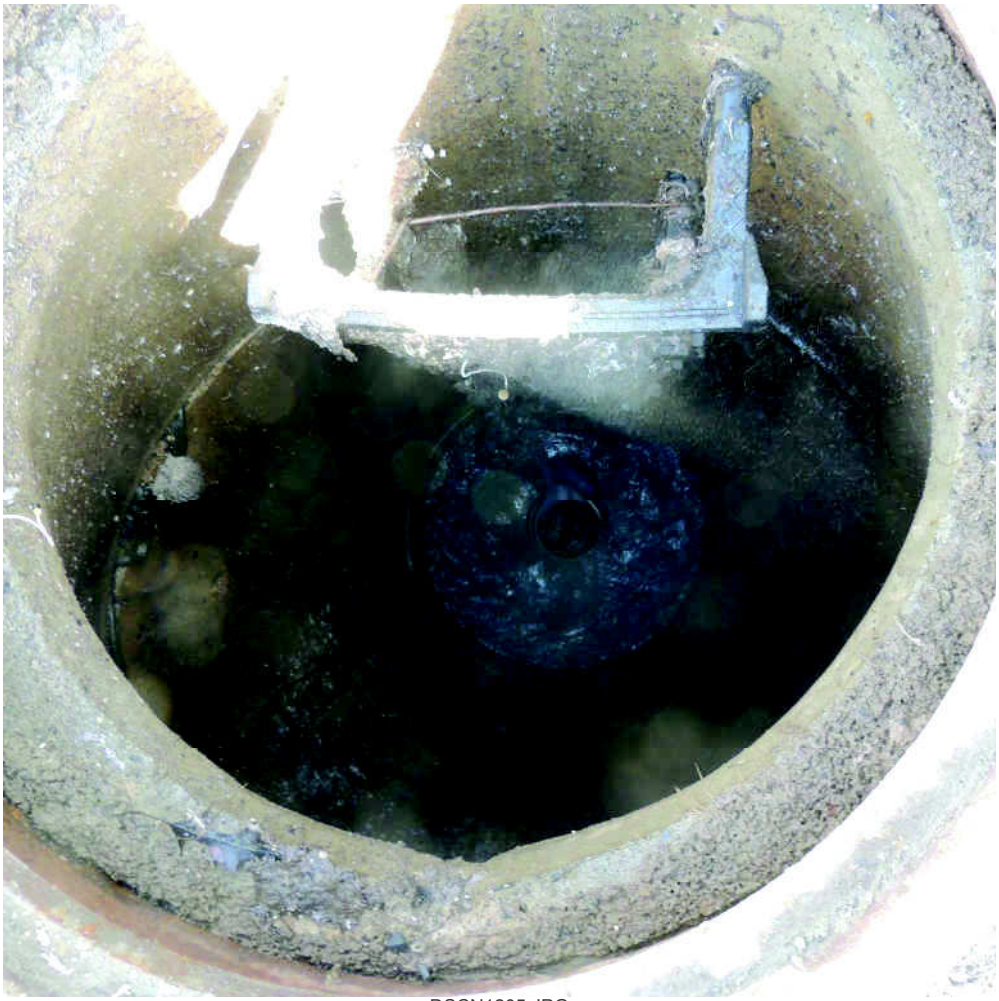
ATTACHMENT 1 - Photographs, Lafarge Building Materials, Inc., Ravena NY, NY0005037, April 4, 2013. Taken by Murray Lantner, P.E., Environmental Engineer, USEPA Region 2 With Nikon Coolpix D5000 Digital Camera	
Photo ID No.	**Photo Description**
DSCN1202	KJ Diversion Chamber on the west side of the KJ Sanitary Pump Station- overflow goes to the OCSD No. 1 Harriman Plant
DSCN1203	KJ Diversion Chamber on the west side of the KJ Sanitary Pump Station- overflow goes to the OCSD No. 1 Harriman Plant
DSCN1204	East Branch Manhole and Standpipe just prior to the Sanitary Pump Station. Debris and rags seen on the top rung of the ladder, indicating that the manhole has been surcharged. Elevated flow levels can overflow via 8" pipe to the OCSD No. 1 Harriman Plant.
DSCN1205	East Branch Manhole and Standpipe just prior to the Sanitary Pump Station. Debris and rags seen on the top rung of the ladder, indicating that the manhole has been surcharged. Elevated flow levels can overflow via 8" pipe ot the OCSD Harriman Plant.
DSCN1206	East Branch Manhole and Standpipe just prior to the Sanitary Pump Station. Debris and rags seen on the top rung of the ladder, indicating that the manhole has been surcharged. Elevated flow levels can overflow via 8" pipe ot the OCSD Harriman Plant.
DSCN1207	Village of Kiryas Joel Sanitary Pump Station (2 Pumps)
DSCN1208	Village of Kiryas Joel Sanitary Pump Station (2 Pumps)
DSCN1209	Flow monitoring device at the Sanitary Pump Station
DSCN1210	Flow monitoring device at the Sanitary Pump Station
DSCN1211	Construction activity at and around the KJ Sanitary Pump Station
DSCN1212	Construction activity at and around the KJ Sanitary Pump Station
DSCN1213	Sanitary sewer manhole - not surcharged - some debris/rags seen on lower rungs of ladder.
DSCN1214	Sanitary sewer manhole with lid to prevent inflow and infiltration.
DSCN1215	Groundwater dewatering discharge form the KJ Sanitary Pump Station construction
DSCN1216	Groundwater dewatering discharge form the KJ Sanitary Pump Station construction
DSCN1217	Construction activity and road building associated with a different KJ project near the Sanitary Pump Station
DSCN1218	Sign associated with Construction activity and road building associated with a different KJ project near the Sanitary Pump Station
DSCN1219	Manhole NW-17 - surge stick - to measure heights of flow was installed but not operating - debris and rags were seen within approximately 1" of the top of the manhole

ATTACHMENT 1 - Photographs, Lafarge Building Materials, Inc., Ravena NY, NY0005037, April 4, 2013. Taken by Murray Lantner, P.E., Environmental Engineer, USEPA Region 2 With Nikon Coolpix D5000 Digital Camera	
Photo ID No.	**Photo Description**
DSCN1220	Manhole NW-17 - surge stick - to measure heights of flow was installed but not operating - debris and rags were seen within approximately 1" of the top of the manhole
DSCN1221	Manhole NW-12 - flow through manhole. Not surcharged. Debris was seen 1/3 of the way up the manhole chimney.
DSCN1222	Sanitary sewer manhole - flowing normally.
DSCN1223	Manhole on old, abandoned 12" line. Small rust colored flow, no sanitary flow, perhaps groundwater.
DSCN1224	Manhole NE-3 - rags seen up to approximately 3' from the top of the manhole.

DSCN1202.JPG

DSCN1203.JPG

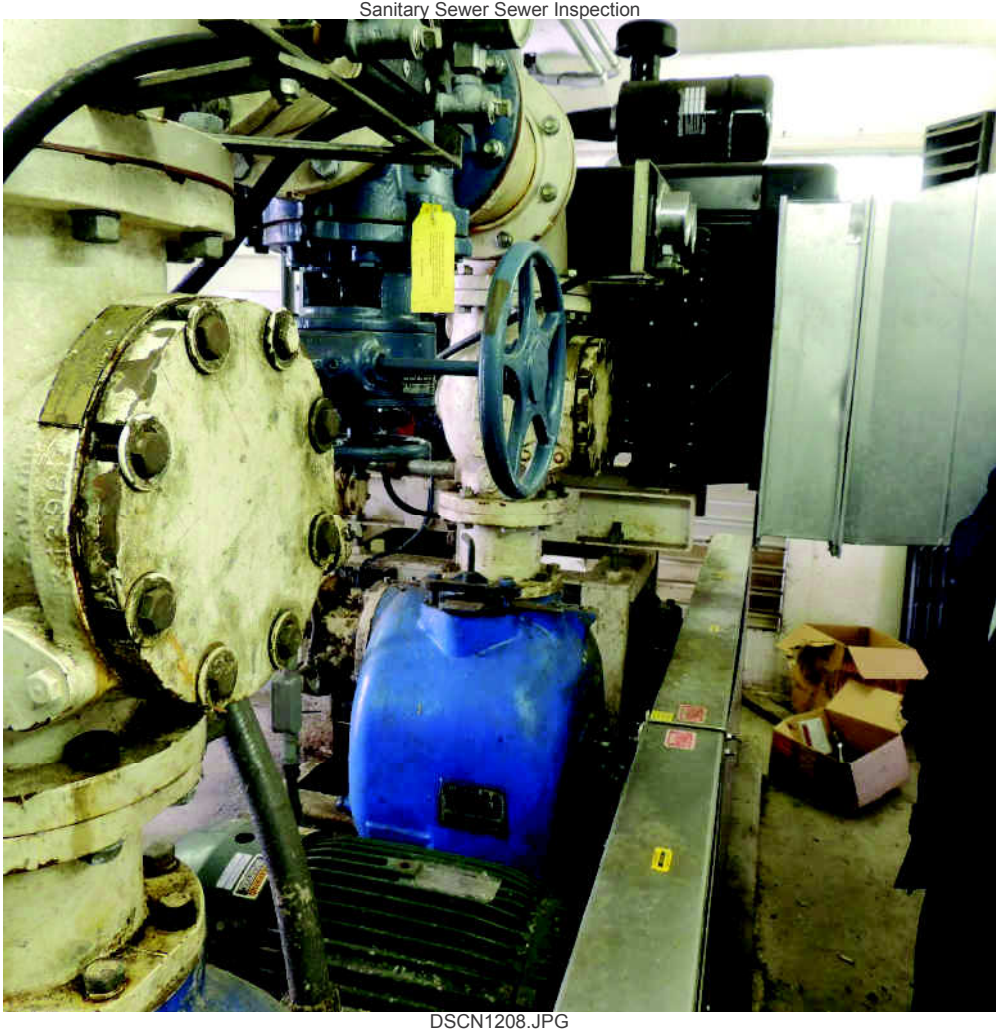
DSCN1204.JPG



DSCN1205.JPG

DSCN1206.JPG

DSCN1207.JPG



DSCN1208.JPG

DSCN1209.JPG
Nikon Coolpix P510

DSCN1210.JPG

DSCN1211.JPG

DSCN1212.JPG

DSCN1213.JPG

DSCN1214.JPG

DSCN1215.JPG

DSCN1216.JPG

DSCN1217.JPG

DSCN1218.JPG

DSCN1219.JPG

DSCN1220.JPG

DSCN1221.JPG

DSCN1222.JPG

DSCN1223.JPG

DSCN1224.JPG

DSCN1225.JPG

ORANGE COUNTY SEWER DISTRICT NO. 1
P.O.BOX 956
HARRIMAN, NY 10926-0956
PHONE: (845) 291-2033

SEMI-ANNUAL SEWER RENT INVOICE

Account Number: 329-1-1.-3

Number of Sewer Units: 1 **Bill Type:** A

Annual Fee per Unit: 388.82 **Semi-annual Fee per Unit:** 194.41

Invoice No. 14831

Invoice Date: 01-07-2013

Payment Due Date: 02-06-2013

Current Amount Due: 194.41

Past Due Amount: .00

Credits: .00

Penalty: .00

TOTAL AMOUNT DUE: ***$194.41***

→ Please include your account number on your check.

11 TAY CT CORP.
PO BOX 890
MONROE NY 10949

Parcel Location: 11 Taylor Ct Unit 203

PLEASE NOTE THE FOLLOWING INFORMATION:
This invoice is due and payable within 30 days from date of invoice. A penalty charge of .83% per month on the original balance will be added to all accounts past due. (This is an annual percentage rate of 10%.) Past due accounts will be turned over to the Commissioner of Finance, County of Orange after October 31st to be added to the annual County & Town tax bill.

Return Bottom Portion with Payment

Please note that any property tax bill address or owner change must be submitted directly to your local assessor's office.

11 TAY CT CORP.
PO BOX 890
MONROE NY 10949

Parcel Location: 11 Taylor Ct Unit 203

Method of Payment: (Check one)

****** *NO CASH ACCEPTED* ******

☐ **Check** ☐ **Money Order** ☐ **Credit Card**

***** Credit cards will NOT be taken by phone *****

NEW FOR 2013:

***** NO CREDIT CARD PAYMENTS VIA FAX *****

Credit Card Payments will only be accepted in person at

Orange County Sewer District #1
72 River Road, Harriman, NY
2nd Entrance Gate

Payments can be made:

8:00 AM to 12:00 PM and 1:00 PM to 3:30 PM

MAKE CHECKS PAYABLE TO:
ORANGE COUNTY SEWER DISTRICT NO. 1

MAILED PAYMENTS MUST BE SENT TO:
PO BOX 956 HARRIMAN, NY 10926

Amount Remitted: _____

Bill type: A
Number of Units: 1
Invoice Date: 01-07-2013
Invoice Number: 14831
Account Number: 329-1-1.-3

TOTAL AMOUNT DUE: ***$194.41***

→ Please include your account number on your check.

Orange County

SDG
Image Mate Online

Tax Links

Property Info
Tax Summary

Details for Taxes Levied in 2013

Municipality of V. Kiryas Joel, Monroe

Swis:	334005	Tax Map ID#:	329-1-1.-3

City Taxes

No City tax information is available.

County Taxes

Description	Rate (per $1000 or Unit)	Value	Amount Due
COUNTY	18.703300	18,600.00	347.88
TOWN	7.056000	18,600.00	131.24
2012 Sch Relevy	0.000000	0.00	1,434.81
2012 Vill Relevy	0.000000	0.00	1,113.28
Co 1 bond stp&intc	2.327600	18,600.00	43.29
Co 1 bond laterals	0.095600	18,600.00	1.78
County upd swr	0.000000	0.00	195.31
			Total: 3,267.59

School Taxes

No School tax information is available.

Village Taxes

No Village tax information is available.

Property Description Report For: 1 Radomsk Way Unit 301, Municipality of V. Kiryas Joel, Monroe

No Photo Available

		Status:	Active
		Roll Section:	Taxable
		Swis:	334005
		Tax Map ID #:	341-1-1.-3
		Property Class:	210 - 1 Family Res
		Site:	RES 1
		In Ag. District:	No
		Site Property Class:	210 - 1 Family Res
		Zoning Code:	PD
		Neighborhood Code:	00007
Total Acreage/Size:	0.01	**School District:**	Kiryas Joel
Land Assessment:	2013 - Tentative $1,300	**Total Assessment:**	2013 - Tentative $20,400
Full Market Value:	2013 - Tentative $100,100		
Equalization Rate:	----	**Legal Property Desc:**	Unit 301 Bldg 16 Vaad Mt Condo VI Map 141-07 Phase 1
Deed Book:	12468	**Deed Page:**	689
Grid East:	581645	**Grid North:**	917703

Area

Living Area:	1,348 sq. ft.	**First Story Area:**	1,348 sq. ft.
Second Story Area:	0 sq. ft.	**Half Story Area:**	0 sq. ft.
Additional Story Area:	0 sq. ft.	**3/4 Story Area:**	0 sq. ft.
Finished Basement:	0 sq. ft.	**Number of Stories:**	1

Structure

Building Style:	Other Style	**Bathrooms (Full - Half):**	2 - 0
Bedrooms:	3	**Kitchens:**	1
Fireplaces:	0	**Basement Type:**	0
Porch Type:	Porch-open/deck	**Porch Area:**	120.00
Basement Garage Cap:	0	**Attached Garage Cap:**	0.00 sq. ft.
Overall Condition:	Normal	**Overall Grade:**	Average
Year Built:	2008		

Owners

Maty Lew
53 Satmar Dr Unit 203
Monroe NY 10950

Sales

Sale Date	Price	Property Class	Sale Type	Prior Owner	Value Usable	Arms Length	Addl. Parcels	Deed Book and Page
6/8/2007	$205,000	210 - 1 Family Res	Building Only	Regal Developers of OC Inc	Yes	Yes	No	12468/689

Utilities

Sewer Type:	Comm/public	**Water Supply:**	Comm/public
Utilities:	Gas & elec	**Heat Type:**	Hot wtr/stm
Fuel Type:	Natural Gas	**Central Air:**	Yes

Improvements

Structure	Size	Grade	Condition	Year
Porch-open/deck	10 × 12	Average	Normal	2008

Land Types

Type	Size

Special Districts for 2013 (Tentative)

Description	Units	Percent	Type	Value
Co 1 bond stp&intc	0	0%		0
Co 1 bond laterals	0	0%		0

Exemptions

Year	Description	Amount	Exempt %	Start Yr	End Yr	V Flag	H Code	Own %

ORANGE COUNTY SEWER DISTRICT NO. 1
P.O.BOX 956
HARRIMAN, NY 10926-0956
PHONE: (845) 291-2033

SEMI-ANNUAL SEWER RENT INVOICE

Invoice No. 15628

Account Number: 341-1-1.-3

Invoice Date: 01-07-2013

Number of Sewer Units: 1 **Bill Type:** B

Payment Due Date: 02-06-2013

Annual Fee per Unit: 530.00 **Semi-annual Fee per Unit:** 265.00

Current Amount Due: 265.00

Past Due Amount: .00

Credits: .00

Penalty: .00

TOTAL AMOUNT DUE: ***$265.00***

LEW MATY
C/O STEINMETZ MOSHE
53 SATMAR DR UNIT 203
MONROE NY 10950

→ Please include your account number on your check.

Parcel Location: 1 Radomsk Way Unit 301

PLEASE NOTE THE FOLLOWING INFORMATION:
This invoice is due and payable within 30 days from date of invoice. A penalty charge of .83% per month on the original balance will be added to all accounts past due. (This is an annual percentage rate of 10%.) Past due accounts will be turned over to the Commissioner of Finance, County of Orange after October 31st to be added to the annual County & Town tax bill.

Return Bottom Portion with Payment

Please note that any property tax bill address or owner change must be submitted directly to your local assessor's office.

LEW MATY
C/O STEINMETZ MOSHE
53 SATMAR DR UNIT 203
MONROE NY 10950

Parcel Location: 1 Radomsk Way Unit 301

Method of Payment: (Check one)

****** *NO CASH ACCEPTED* ******

☐ **Check** ☐ **Money Order** ☐ **Credit Card**

***** Credit cards will NOT be taken by phone *****

NEW FOR 2013:

***** NO CREDIT CARD PAYMENTS VIA FAX *****

Credit Card Payments will only be accepted in person at

Orange County Sewer District #1
72 River Road, Harriman, NY
2nd Entrance Gate

Payments can be made:

8:00 AM to 12:00 PM and 1:00 PM to 3:30 PM

MAKE CHECKS PAYABLE TO:
ORANGE COUNTY SEWER DISTRICT NO. 1

MAILED PAYMENTS MUST BE SENT TO:
PO BOX 956 HARRIMAN, NY 10926

Amount Remitted: _____

Bill type: B
Number of Units: 1
Invoice Date: 01-07-2013
Invoice Number: 15628
Account Number: 341-1-1.-3

TOTAL AMOUNT DUE: ***$265.00***

→ Please include your account number on your check.

Orange County

Image Mate Online

Tax Links

Property Info

Tax Info

Details for Taxes Levied in 2013

Municipality of V. Kiryas Joel, Monroe

Swis:	334005	Tax Map ID#:	341-1-1.-3

City Taxes

No City tax information is available.

County Taxes

Description	Rate (per $1000 or Unit)	Value	Amount Due
COUNTY	18.703300	20,400.00	381.55
TOWN	7.056000	20,400.00	143.94
Co 1 bond stp&intc	2.327600	20,400.00	47.48
Co 1 bond laterals	0.095600	20,400.00	1.95
			Total: 574.92

School Taxes

No School tax information is available.

Village Taxes

No Village tax information is available.

Property Description Report For: 11 Taylor Ct Unit 203, Municipality of V. Kiryas Joel, Monroe

No Photo Available

		Status:	Active
		Roll Section:	Taxable
		Swis:	334005
		Tax Map ID #:	329-1-1.-3
		Property Class:	210 - 1 Family Res
		Site:	RES 1
		In Ag. District:	No
		Site Property Class:	210 - 1 Family Res
		Zoning Code:	-
		Neighborhood Code:	00007
Total Acreage/Size:	0.01	**School District:**	Kiryas Joel
Land Assessment:	2013 - Tentative $1,500	**Total Assessment:**	2013 - Tentative $18,600
Full Market Value:	2013 - Tentative $91,300		
Equalization Rate:	----	**Legal Property Desc:**	Unit 201 11 Taylor Ct Condo Map 137-99
Deed Book:	12930	**Deed Page:**	800
Grid East:	584292	**Grid North:**	913753

Area

Living Area:	1,228 sq. ft.	**First Story Area:**	1,228 sq. ft.
Second Story Area:	0 sq. ft.	**Half Story Area:**	0 sq. ft.
Additional Story Area:	0 sq. ft.	**3/4 Story Area:**	0 sq. ft.
Finished Basement:	0 sq. ft.	**Number of Stories:**	1

Structure

Building Style:	Other Style	**Bathrooms (Full - Half):**	2 - 0
Bedrooms:	3	**Kitchens:**	1
Fireplaces:	0	**Basement Type:**	0
Porch Type:	0	**Porch Area:**	0.00
Basement Garage Cap:	0	**Attached Garage Cap:**	0.00 sq. ft.
Overall Condition:	Normal	**Overall Grade:**	Average
Year Built:	1978		

Owners

11 TAY Ct Corp.
P.O. Box 890
Monroe NY 10949

Sales

Sale Date	Price	Property Class	Sale Type	Prior Owner	Value Usable	Arms Length	Addl. Parcels	Deed Book and Page
11/16/2009	$118,001	210 - 1 Family Res	Building Only	Weiss, Amron Yoel	No	No	No	12930/800
5/12/2004	$242,000	210 - 1 Family Res	Building Only	11 Taylor Inc	Yes	Yes	No	11506/1172
9/13/2000	$130,000	210 - 1 Family Res	Building Only	Lowy, Isaac	Yes	Yes	No	5373/36

Utilities

Sewer Type:	Comm/public	**Water Supply:**	Comm/public
Utilities:	Gas & elec	**Heat Type:**	Hot wtr/stm
Fuel Type:	Natural Gas	**Central Air:**	Yes

Improvements

Structure	Size	Grade	Condition	Year

Land Types

Type	Size

Special Districts for 2013 (Tentative)

Description	Units	Percent	Type	Value
Co 1 bond stp&intc	0	0%		0
Co 1 bond laterals	0	0%		0

Exemptions

Year	Description	Amount	Exempt %	Start Yr	End Yr	V Flag	H Code	Own %

SEWAGE BACK/FLOODED BASEMENT PROCEDURE

1. Call comes into Harriman Sewer Treatment Plant (HSTP), Answering service or Environmental Facilities & Services (EF&S) from owner/tennant. Fill out complaint form.
2. HSTP to notify EF&S and vice versa.
3. Sewer Treatment Plant or EF&S to notify superintendent/inspector to investigate actual conditions at the site.
4. Superintendent/Inspector to call owner/tenant to verify conditions.
5. Superintendent/inspector goes to the site to check manholes on 8" main line, 6" lateral to basement, and talk with owner/tenant. Have O & R turn off gas and/or electric power, as required.
6. field crew sent to unblock 8" main line or notify homeowner to get a plumber to unblock 6" lateral.
7. Field crew to pump out basement, as required.
8. Field crew to take pictures, as required.
9. Superintendent/inspector reports back to EF&S of actual conditions and determines who is responsible for back up, if possible.
10. Risk managment to be notified, as required.
11. Owner/tenant to be given a list of availalbe cleaning firms, as required.
12. Homeowner to have clean-up done under homeowner's insurance policy.

4

13. If homeowner's insurance policy does not cover damage/loss, homeowner will probably send final bill to Risk Management.
14. Principal Sanitary Engineer to assemble all phone call logs, all inspectors' reports and pictures for review by EF&S Commissioner.
15. All relevant information to be forwarded to Risk Management, when requested.

COMMERCIAL AND RESIDENTIAL BUILDING CLEANING SERVICE

	PHONE
1. Calco Clean Inc. 49 Excelsior Ave. Middletown N.Y. 10940	343-6443 or 1-800-94 CALCO
2. Service Master of Northern Orange County 328 Main Cornwall N.Y. 12518	534-2703
3. Hannah Service Co Inc. 805 E. Route 52 Walden N.Y.	564-1800
4. Golden Area Cleaning Service 68 Edinburgh Rd. Middletown N.Y. 10940	692-6492
5. Servpro of Orange County Middletown N.Y. 10940	342-3333 or 800-345-1940

New York State Department of Environmental Conservation
Division of Water, Region 3
100 Hillside Avenue – Suite 1W, White Plains, New York 10603-2860

Phone: (914) 428-2505 X350 • **Fax:** (914) 428-0323
Website: www.dec.ny.gov

Joseph Martens
Commissioner

October 17, 2012

Peter S. Hammond, Deputy Commissioner
Orange County Department of Public Works
Division of Environmental Facilities & Services
2455-2459 Route 17M, P.O. Box 637
Goshen, NY 10924-0637

Re: Orange County Sewer District #1 Wastewater Treatment Plant
Village of Harriman, Flow Management Plan
SPDES Permit # NY 0027901

Dear Mr. Hammond:

The Department received the Orange County Sewer District #1's Flow Management Plan (Plan) required to be submitted to this office by August 1, 2012. The requirements for the Flow Management Plan are set forth in 6 NYCRR Section 750-2.9 (c)(1)(i), and 6 NYCRR Section 750-2.9 (c)(1)(ii). Based on this review, DEC proposes a meeting be held on November 13, 2012 at 1:00 p.m. in the Department's New Paltz office to discuss the following comments on the Flow Management Plan. DEC looks forward to the meeting on November 13, 2012 unless there is an alternative available date and time which we can agree before the end of November 2012.

Orange County Sewer District #1 Authority

Please provide a status update of the County's negotiations with the satellite municipalities to expand the Orange County Sewer District #1 (OCSD#1) boundary to incorporate these municipalities into the sewer district. What is the County's timeframe for extending the OCSD#1 to incorporate these municipalities?

Inventory of Facilities/Project Which Have Applied to Connect and Determination of Capacity

The inventory of projects planned for future connection to the OCSD#1 Harriman Wastewater Treatment Plant (Harriman WWTP) should include design flows. The inventory of projects in the satellite municipalities listed in Appendix J of the Plan is missing the Fox Hill Cluster Subdivision and The Greens of Chester projects both located in the Town of Chester. This office also has no information on the inventory of projects within the District listed in Appendix I of the Plan, including: Bakertown Condominiums,

Hidden Creek Condominiums, Shea Meadows, Ekstein, Camelot Manor, Village View Estates, Orchard Development, and Bald Hill Estates. Do these projects need sewer extension approval by this Department and what is the timeframe for connection?

The determination of whether there is capacity at the Harriman WWTP for additional connections is insufficient. The Plan reports improved operations at several significant users within contributing satellite municipalities, ongoing infiltration and inflow reduction by the OCSD#1, and similar infiltration and inflow reductions in satellite municipalities during 2011. Other than the improvements at the Village of Kiryas Joel Wastewater Treatment Plant (Kiryas Joel WWTP), there was no information provided in the Plan on the improvements at several significant users within the contributing satellite municipalities and no information provided on infiltration and inflow reductions in the satellite municipalities. This information is requested.

Based on the monthly discharge monitoring reports for the Kiryas Joel WWTP and the Harriman WWTP, it appears up to 300,000 gpd less domestic flow may have been received by the Harriman WWTP during the last few months, due to the improvements at the Kiryas Joel WWTP and Kiryas Joel Poultry facility. Please provide flow metering data for the Kiryas Joel WWTP bypass to the Harriman WWTP.

The Kiryas Joel WWTP is owned by the Village of Kiryas Joel and authorized by a separate SPDES permit. Under a lease agreement between the Village of Kiryas Joel and OCSD #1, the County leases a portion of the plant's capacity from the Village. Furthermore, there is no sanitary sewer connection from other District users to the Village of Kiryas Joel WWTP. Please clarify why the Plan includes a trend projection that is based on the combined treatment capacity of the Harriman WWTP and Kiryas Joel WWTP to determine whether there is adequate wastewater capacity at the Harriman WWTP. The County must provide a sufficient determination of whether there is adequate capacity at the Harriman WWTP based on flows, current population, and current growth rates in the OCSD#1 and satellite municipalities.

Please also be aware that the Village of Kiryas Joel has applied to the Department for a permit modification to increase their water taking from 1.9 MGD to 2.54 MGD. It is also understood that the Village is pursuing a connection to the NYC DEP aqueduct. How does the County plan to account for this additional water taking and resulting wastewater?

Schedule of Implementation of Flow Reduction Measures

According to the Orange County Department of Public Works 2011 flow monitoring table, dated 12/31/11, OCSD#1 exceeded its allocated flow of 3.665 MGD. Therefore, please document whether infiltration and inflow has been investigated in all parts of OCSD#1; identify how much investigative work has been completed; and identify by what method that work has been completed within each municipal boundary, including the Village of Harriman, Village of Kiryas Joel, Village of Monroe and the portion of the Town of Monroe within the Ramapo Basin. Additionally, please provide the locations of the manhole remediation projects and the trenchless repairs of sewer main defects within OCSD#1.

Please also include in the schedule of implementation what activities will occur after the infiltration and inflow inspections of the Round Lake Interceptor and Brooklyn interceptor. Please also provide information on the estimated amount of infiltration and inflow that the remediation projects will eliminate.

According to the Orange County Department of Public Works 2011 flow monitoring table, dated 12/31/11, the Village of Chester and Village of Woodbury exceeded their allocated flow in 2011. Although the Town of Chester and Village of South Blooming Grove did not exceed the allocated flows, the table clearly shows peak flows occurred during the wet weather months, which corresponded to the months when peak flows occurred at the Harriman WWTP. Therefore, it appears that there are opportunities for flow reduction measures for the Village of Chester, Town of Chester, Town of Blooming Grove, and Village of South Blooming Grove. Repairing infiltration and inflow issues upon discovery does not equate to a flow management plan. These municipalities must have an active, ongoing plan to investigate the sanitary sewer system for infiltration and inflow, and the County must enforce these plans for overall flow management. Further, the Village of Woodbury may need to increase its efforts to assess and eliminate infiltration and inflow in its collection system in a shorter timeframe than the 10 years they have committed to.

Map Delineating the Service Area

Please provide updated sewer maps including all manholes and pump stations for the Town of Blooming Grove, Village of South Blooming Grove, Town/Village of Woodbury, the Village of Chester, Town of Chester and a portion of the Town of Monroe.

Reporting Information and Submission Schedule

The description of information that will be reported during implementation of the Plan and schedule for such reporting is insufficient because it does not include any of the proposed items to be implemented by the Plan.

Water Conservation Measures

The focus of the Plan appears to solely be infiltration and inflow removal. Water conservation measures are insufficient and should be significant because they can help to stabilize influent flows below design flows.

Reduction of Infiltration/Inflow

Please provide details of the OCSD#1 seven (7) year preventative maintenance cycle of the sewer system. Pump Station flow data should be utilized by each satellite municipality to determine the significance of infiltration and inflow during wet weather events. OCSD#1 has not provided sufficient assurance that infiltration and inflow is actively being pursued and eliminated in the satellite municipalities, except for the Village of Woodbury. The MBJOMC has not provided a detailed plan or schedule for investigating excess flows into the sanitary sewer system.

Prevention of Future Sources of Infiltration/Inflow

Please explain how the reconstruction of the Village of South Blooming Grove pump

station helps to satisfy the requirement of preventing future sources of infiltration and inflow other than monitoring.

Maximizing Capacity
The section of the Plan regarding maximizing sewer system capacity did not include a plan for cleaning and/or lining the sewer system.

Capital Improvements
Please provide specific information regarding the issuance of the Request For Proposals for the facility planning process for an expansion of the Harriman WWTP. From the data available, this would appear to be an especially important component of the long term plan.

PLEASE BE ADVISED that the violations cited in the Department's February 15, 2012 and March 30, 2012 Notice of Violation letters are being referred to the Office of General Counsel for appropriate enforcement action. Those Notices of Violation are attached for your reference.

The Department anticipates your compliance with the current SPDES Permit NY 0027901 and the requirements of the Environmental Conservation Law. Please contact me at (914) 428-2505 ext. 350 should you have any questions.

Sincerely,

S. Karimipour

Shohreh Karimipour, P.E.
Regional Water Engineer

cc: Thomas Rudolph, Regional Engineer
Regional Attorney
Charles W. Lee, Orange County Department of Public Works
Village of Harriman (w/o att.)
Village of Kiryas Joel (w/o att.)
Village of Monroe (w/o att.)
Town of Monroe (w/o att.)
Village of Woodbury (w/o att.)
Town of Woodbury (w/o att.)
Village of South Blooming Grove (w/o att.)
Town of Blooming Grove (w/o att.)
Village of Chester (w/o att.)
Town of Chester (w/o att.)
Moodna Joint Operations & Maintenance Commission (w/o att.)

New York State Department of Environmental Conservation
Division of Water, Region 3
100 Hillside Avenue – Suite 1W, White Plains, New York 10603-2860
Phone: (914) 428-2505 • **FAX:** (914) 428-0323
Website: www.dec.state.ny.us

Joseph Martens
Commissioner

NOTICE OF VIOLATION

February 15, 2012

Mr. Peter Hammond, Deputy Commissioner
Orange County Department of Public Works
Division of Environmental Facilities and Services
P.O. Box 637, Route 17M
Goshen, NY 10924

Re: **Annual Comprehensive Inspection**
Orange County Sewer District #1 Wastewater Treatment Plant
(V) Harriman
SPDES # NY 0027901

Dear Mr. Hammond:

On January 11, 2012 Department staff performed an inspection of the Orange County Sewer District #1 Wastewater Treatment Plant for the purpose of evaluating compliance with the State Pollution Discharge Elimination System (SPDES) Permit and Article 17 of the Environmental Conservation Law. As you will recall these provisions of State Law derive from the Clean Water Act, and compliance with these requirements is critical for protection of public health and environmental quality. The inspection has been designated unsatisfactory. Please refer to the attached copy of the inspection report and inspector comments for more detailed information. Immediate corrective action is necessary to address the issues identified below.

SPDES Permit Flow Limit

The flow limit in the SPDES permit is based on the design average flow of the treatment plant. The design average flow is the average of the daily volumes to be received for a continuous 12 month period. Proper measurement of design average flow is a critical part of proper wastewater treatment plant operation, and exceeding the design average flow may impact the treatment plant's compliance with State Law and treatment efficiency. The issues concerning flow at the facility are:

1) Flow was not measured on 14 days in January 2011; 4 days in February 2011; 3 days in March 2010; 10 days in July 2010; and 3 days in August 2010 (a total of 34 times). The facility's SPDES Permit requires flow to be measured daily. Please submit a proposal for a contingency or backup flow measuring system to ensure flows are measured daily in accordance with the SPDES permit requirements to the Department by March 9, 2012.

2) The facility has reached or exceeded 95% of its design flow on an annual average basis for calendar year 2011. Therefore, a Flow Management Plan will be required. *See* 6 NYCRR Part 750-2.9 (c). The Department's Albany office will contact you with additional detail regarding the submission of the Flow Management Plan.

3) On January 4, 2012, the Department requested information regarding the County's enforcement of its sewer use ordinance for flow. The Department requested receipt of this information by January 20, 2012, but has not received this information. Please submit the required enforcement information immediately.

4) Precipitation events have caused high flows at the plant which has contributed to SPDES permit effluent limit violations. A Notice of Violation for all SPDES permit effluent limit violations will be sent under separate letter.

Failure to measure flow daily as noted above constitutes 34 individual violations of the SPDES permit and Article 17 of the New York State Environmental Conservation Law (ECL), which are subject to penalties of up to $37,500 per day per violation.

Discharge Monitoring Reports

Discharge Monitoring Reports are official reports required to be submitted by a permittee to the Department. Each month, these submitted reports summarize the influent and effluent monitoring results obtained by the permittee over periods of time as specified in the SPDES permit. These reports, and the accuracy of their contents, are critical requirements of the SPDES Program. Further, failure to comply with the New York SPDES Permit, issued pursuant to the ECL, and authorized by the federal Clean Water Act, constitutes violations. The issues concerning the Discharge Monitoring Reports are:

1) There are errors with the number of excursions reported in the Discharge Monitoring Reports for April 2010, October 2010, February 2011, March 2011, April 2011, August 2011, September 2011, and October 2011.

2) There are errors with reporting average flow and loading values in the Discharge Monitoring Reports for March 2010, July 2010, August 2010, January 2011 and February 2011. As identified previously, flow was not measured on certain days of each of these months. Each day flow is not measured is considered an invalid sample as per the Discharge Monitoring Report Manual. Accordingly, the average flow for those months should be reported with a greater than (>) symbol and any calculated loading values using invalid flow samples should also be reported with a greater than symbol.

Please refer to the Discharge Monitoring Report Manual, amend the DMRs accordingly, and resubmit to the Department.

The Department anticipates your immediate compliance with the requirements of the SPDES permit. Compliance efforts by the County will be taken into consideration before Department staff makes a final determination on appropriate enforcement action for the violations.

If you have any questions, please contact me at the above number, ext. 357.

Sincerely,

Manju Cherian

Manju Cherian, P.E.
Environmental Engineer 2

cc: Thomas Rudolph, Regional Engineer (w/o att.)
Patrick Ferracane, Acting Regional Water Manager
John Parker, Regional Attorney (w/o att.)
Meredith Streeter, Bureau of Water Compliance (w/o att.)

New York State Department of Environmental Conservation
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Website: www.dec.ny.gov

Joseph Martens
Commissioner

NOTICE OF VIOLATION

March 30, 2012

Peter Hammond, Deputy Commissioner
Orange County Department of Public Works
Division of Environmental Facilities & Services
2455-2459 Route 17M, P.O. Box 637
Goshen, NY 10924-0637

Re: Orange County Sewer District #1 Wastewater Treatment Plant
Village of Harriman
SPDES Permit # NY 0027901

Dear Deputy Commissioner:

I am writing regarding the Orange County Sewer District #1 (OCSD#1) Wastewater Treatment Plant in Harriman, New York and to bring to your attention numerous and significant violations of the Department's SPDES Permit for the facility. The record in this case indicates that there are not only numerous permit violations by exceeding Clean Water Act discharge standards, but also lapses in the timely and properly conducting tests on its operations. Clean water and Clean Water Act compliance are significant priorities of the Department of Environmental Conservation, and the violations identified in this NOTICE must be properly and appropriately addressed immediately.

Department staff has reviewed the documents provided by Sewer District #1, known as Discharge Monitoring Reports, for the time period between January 1, 2010 to December 31, 2011. The Sewer District records indicate that during this time, the OCSD#1 Wastewater Treatment Plant exceeded its SPDES Permit effluent limits a total of 67 times, including:

- 4 times for $CBOD_5$ daily maximum loading (lbs/day);
- 1 time for $CBOD_5$ daily maximum concentration (mg/l);
- 2 times for $CBOD_5$ minimum percent removal;
- 9 times for Ultimate Oxygen Demand loading (lbs/day);
- 10 times for Ultimate Oxygen Demand concentration (mg/l);
- 3 times for Dissolved Oxygen daily minimum;
- 2 times for Total Suspended Solids minimum percent removal;
- 4 times for Total Suspended Solids loading (lbs/day);
- 1 time for Settleable Solids daily maximum;
- 7 times for Fecal Coliform 7 day geometric mean;
- 2 times for Fecal Coliform 30 day geometric mean;
- 3 times for Total Ammonia Nitrogen (as NH3) monthly average concentration; and
- 19 times for Flow monthly average.

The SPDES Permit requires the Sewer District perform weekly sampling for fecal coliform, UOD and $CBOD_5$. These requirements have not been consistently met as required. One weekly sample was not performed for fecal coliform, UOD and $CBOD_5$ in February 2011 and consequently represent 3 additional violations of the SPDES permit.

PLEASE BE ADVISED that the numerous and repeated violations by the Sewer District subject Orange County to EPA's Watch List for significant violations because at least 25 effluent violations in a 2 year period have been reported to the Department. EPA Watch List facilities, because they are significant violators of environmental laws, require the Department to provide a timely and appropriate response to the Agency regarding steps to be taken to bring the facility into full compliance.

PLEASE BE ADVISED that the Sewer District is required to submit to the Department a Flow Management Plan for the facility as required by the February 15, 2012 Notice of Violation issued by the Department to the Sewer District. Please find attached a copy of the February 2012 Notice of Violation for your convenience.

PLEASE BE FURTHER ADVISED that these violations of the SPDES Permit constitute violations of Article 17 of the Environmental Conservation Law and are subject to penalties of up to $37,500 per violation per day. The Department anticipates your compliance with the SPDES Permit and the requirements of the Environmental Conservation Law.

Orange County Sewer District #1 officials and representatives are directed at 1:00 p.m. on April 11, 2012 to attend a technical meeting in the Department's Region 3 Headquarters in New Paltz. At that time, Department technical staff will discuss the violations at the OCSD#1 Wastewater Treatment Plant and Department staff expects that the Sewer District / Orange County will be prepared to discuss its plans to address the violations and to bring the facility into compliance with the Environmental Conservation Law. Thank you in advance for bringing the facility into compliance with the SPDES Permit for the protection of New York's water. Please contact me at (914) 428-2505 ext. 357 if you have any questions.

Sincerely,

Manju Cherian

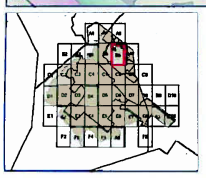
Manju Cherian, P.E.
Environmental Engineer 2

cc: Thomas Rudolph, Regional Engineer
Patrick Ferracane, Regional Water Manager
John Parker, Regional Attorney
Meredith Streeter, Bureau of Water Compliance

Orange County Sewer District #1 Effluent Violations
01/01/2010 to 12/31/2011

Monitoring Period End Date	Outfall	Parameter	Limit Type	Monitoring Location	Limit Units	SPDES Limit	DMR Value	Number of Violations
03/31/2010	001M	Flow, in conduit or thru treatment plant	MO AVG	Raw Sewage Influent	MGD	6.	6.23	1
03/31/2010	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	8.23	1
04/30/2010	001M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	lb/d	2500.	3554.	1
04/30/2010	001M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	mg/L	50.	65.1	1
04/30/2010	002M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	lb/d	920.	1085.	1
04/30/2010	002M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	mg/L	55.	65.	1
05/31/2010	001M	Coliform, fecal general	7 DA GEO	Effluent Gross	#/100mL	400.	450.	1
07/31/2010	001M	BOD, carbonaceous, 05 day, 20 C	DAILY MX	Effluent Gross	lb/d	250.	125.	1
07/31/2010	001M	Carbonaceous oxygen demand, % removal	MO AV MN	Percent Removal	%	85.	97.	1
07/31/2010	001M	Flow, in conduit or thru treatment plant	MO AVG	Raw Sewage Influent	MGD	6.	3.721	1
07/31/2010	001M	Oxygen, dissolved (DO)	DAILY MN	Effluent Gross	mg/L	7.	6.8	2
07/31/2010	001M	Solids, suspended percent removal	MO AV MN	Percent Removal	%	85.	97.	1
07/31/2010	001M	Solids, total suspended	DAILY MX	Effluent Gross	lb/d	500.	156.	1
07/31/2010	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	3.721	1
08/31/2010	001M	BOD, carbonaceous, 05 day, 20 C	DAILY MX	Effluent Gross	lb/d	250.	163.	1
08/31/2010	001M	Carbonaceous oxygen demand, % removal	MO AV MN	Percent Removal	%	85.	97.	1
08/31/2010	001M	Flow, in conduit or thru treatment plant	MO AVG	Raw Sewage Influent	MGD	6.	4.212	1
08/31/2010	001M	Solids, suspended percent removal	MO AV MN	Percent Removal	%	85.	97.	1
08/31/2010	001M	Solids, total suspended	DAILY MX	Effluent Gross	lb/d	500.	204.	1
08/31/2010	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	4.212	1
10/31/2010	001M	Coliform, fecal general	7 DA GEO	Effluent Gross	#/100mL	400.	470.	1
10/31/2010	001M	Solids, settleable	DAILY MX	Effluent Gross	mL/L	.1	.3	1
01/31/2011	001M	Flow, in conduit or thru treatment plant	MO AVG	Raw Sewage Influent	MGD	6.	2.641	1
01/31/2011	001M	Solids, total suspended	7 DA AVG	Effluent Gross	lb/d	2300.	118.	1
01/31/2011	001M	Solids, total suspended	MO AVG	Effluent Gross	lb/d	1500.	110.	1

Monitoring Period End Date	Outfall	Parameter	Limit Type	Monitoring Location	Limit Units	SPDES Limit	DMR Value	Number of Violations
01/31/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	4.641	1
02/28/2011	001M	Coliform, fecal general	30DA GEO	Effluent Gross	#/100mL	200.	10.	1
02/28/2011	001M	Coliform, fecal general	7 DA GEO	Effluent Gross	#/100mL	400.	10.	1
02/28/2011	001M	Nitrogen, ammonia, total (as NH3)	MO AVG	Effluent Gross	mg/L	2.2	5.2	1
02/28/2011	001M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	mg/L	50.	73.5	1
02/28/2011	002M	Coliform, fecal general	30DA GEO	Effluent Gross	#/100mL	200.	10.	1
02/28/2011	002M	Coliform, fecal general	7 DA GEO	Effluent Gross	#/100mL	400.	10.	1
02/28/2011	002M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	lb/d	920.	1226.	1
02/28/2011	002M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	mg/L	55.	73.5	1
02/28/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	6.795	1
03/31/2011	001M	Nitrogen, ammonia, total (as NH3)	MO AVG	Effluent Gross	mg/L	2.2	5.	1
03/31/2011	001M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	lb/d	2500.	4739.	3
03/31/2011	001M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	mg/L	50.	88.5	3
03/31/2011	002M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	lb/d	920.	1476.	3
03/31/2011	002M	Oxygen demand, ultimate	DAILY MX	Effluent Gross	mg/L	55.	88.5	3
03/31/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	7.979	1
04/30/2011	001M	Coliform, fecal general	7 DA GEO	Effluent Gross	#/100mL	400.	500.	1
04/30/2011	002M	Coliform, fecal general	7 DA GEO	Effluent Gross	#/100mL	400.	500.	1
04/30/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	6.41	1
06/30/2011	001M	Coliform, fecal general	7 DA GEO	Effluent Gross	#/100mL	400.	395.	1
07/31/2011	001M	Nitrogen, ammonia, total (as NH3)	MO AVG	Effluent Gross	mg/L	1.3	1.86	1
08/31/2011	001M	BOD, carbonaceous, 05 day, 20 C	DAILY MX	Effluent Gross	lb/d	250.	277.	1
08/31/2011	001M	Flow, in conduit or thru treatment plant	MO AVG	Raw Sewage Influent	MGD	6.	6.518	1
08/31/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	6.518	1
09/30/2011	001M	Flow, in conduit or thru treatment plant	MO AVG	Raw Sewage Influent	MGD	6.	7.554	1
09/30/2011	001M	Oxygen, dissolved (DO)	DAILY MN	Effluent Gross	mg/L	7.	5.7	1
09/30/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	7.554	1
10/31/2011	001M	BOD, carbonaceous, 05 day, 20 C	DAILY MX	Effluent Gross	lb/d	250.	486.	1
10/31/2011	001M	BOD, carbonaceous, 05 day, 20 C	DAILY MX	Effluent Gross	mg/L	5.	6.	1
10/31/2011	001M	Flow, in conduit or thru treatment plant	MO AVG	Raw Sewage Influent	MGD	6.	6.304	1
10/31/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	6.304	1
11/30/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	6.382	1
12/31/2011	SUMM	Flow, in conduit or thru treatment plant	MO AVG	Effluent Gross	MGD	6.	6.015	1



Legend

- Pump Station
- Diversion Chamber
- Manholes
- Gravity Mains
- Atlas Grid
- Treatment Facilities
- Sewer District 1
- Interstate; Federal Highway
- State Route; County Road
- Local Road
- Buildings

1 inch = 150 feet

0 50 100 200 300 400 Feet

Orange County Sewer District 1 Page: B6

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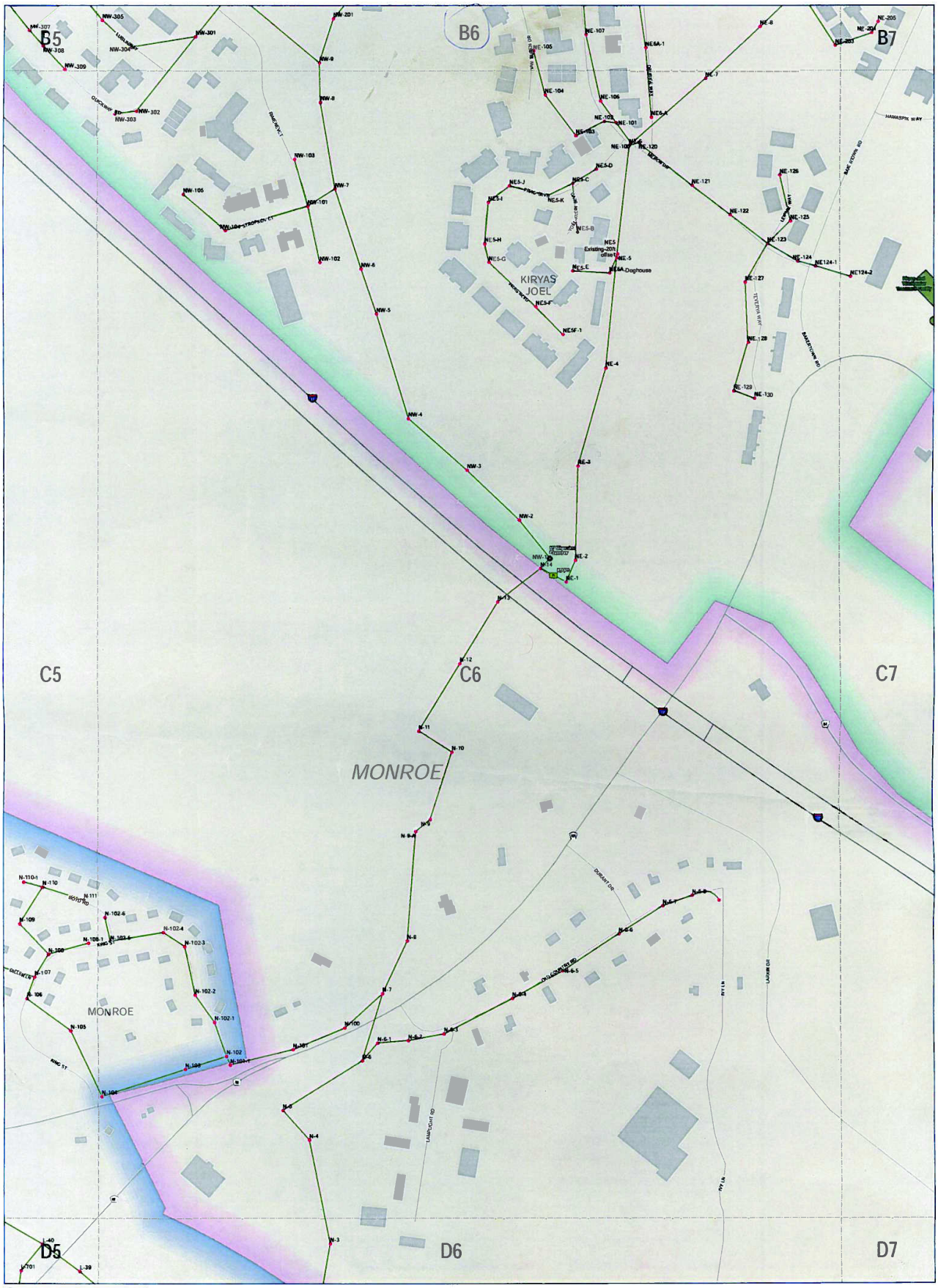
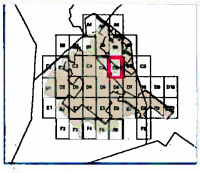
Printing date 2/22/13 Request # 4593





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Orange County Sewer District 1 Page: C6

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